State of Colorado
Greening Government
Planning and
Implementation Guide

Prepared by the
State Greening Government Coordinating Committee and
Administrative Team
2006

D 005 05

EXECUTIVE ORDER
GREENING OF STATE GOVERNMENT

Pursuant to the authority vested in the Office of the Governor of the State of Colorado, I, Bill Owens, Governor of the State of Colorado, hereby issue this Executive Order concerning enhancing the efficiency and greening of state government.

1. Background and Need

State government needs to operate as efficiently as possible, but at the same time it is important to set an example through efforts to reduce the use of limited resources, increase the cost-effectiveness of state government, and improve Colorado's environment and the health of our children and future generations. Accordingly, the State of Colorado is committed to business practices that contribute to the mutually compatible goals of economic vitality, a healthy environment and strong communities.

The State has already taken significant steps in this direction, particularly under Executive Order D 014 03, Energy Performance Contracting to Improve State Facilities. The Department of Corrections through its Energy Management Program avoids $1.8 million in annual costs (10 percent of its utility budget) and is planning additional facility improvements that could result in avoided annual costs exceeding $1 million. The Department of Human Services through its aggressive program to manage its $5.3 million annual utility budget achieved a 10 percent level of cost avoidance and is implementing projects through performance contracts that will avoid an additional $1,000,000 in annual utility costs. The Department of Personnel and Administration, with the Judicial Department and the Department of Labor & Employment, is using performance contracting for a large-scale, comprehensive effort that captures $800,000 in annual reductions to pay for $14 million in facility upgrades. Other state agencies including the Department of Military Affairs, Colorado School for the Deaf and the Blind, Department of Public Health and Environment, and Department of Natural Resources are implementing similar projects.

Within state government, such sustainable practices require decisions based on a systematic evaluation of the costs and long-term impacts of an activity or product on health and safety, communities, and the environment and economy of the State of Colorado. State agencies, through changes in daily operations, ongoing programs, and long-range planning, are able to simultaneously have a significant positive impact on the environment, economic efficiency of state government, and the character of our communities. Government can also foster markets for emerging environmental technologies and products. Finally, state government can be a model for environmental leadership by implementing pollution prevention and resource conservation programs that not only enhance environmental protection, but also save taxpayers' money through reduced costs, including reduced material costs, waste disposal costs and utility bills.

The most effective manner for state government to implement such programs is through the establishment of systems and procedures to evaluate costs and manage environmental impacts. This system should be developed and implemented consistently across state government with the assistance of the Governor's Office of Energy Management and Conservation, Department of Public Health and Environment and Department of Personnel and Administration.

2. Directive

A. I hereby direct the Executive Directors of all state agencies and departments to evaluate their current business operations in accordance with the goals of this Order and develop and implement policies and procedures to promote environmentally sustainable and economically efficient practices, including, but not limited to:
   i. Adopting the United States Green Buildings Council's Leadership in Energy and Environmental Design Green Building Rating System for Existing Buildings (LEED-EB) in operating, maintaining and managing existing buildings, to the extent applicable and practicable.
   ii. Incorporating LEED for New Construction (LEED-NC) practices to design energy and resource efficient new buildings, to the extent that this is deemed cost-effective.
   iii. Initiating an energy management program to monitor and manage utility usage and costs, as resources become available.

B. I hereby direct the Executive Directors of the Governor's Office of Energy Management and Conservation, Department of Public Health and Environment, and Department of Personnel and Administration, to establish a Colorado Greening Government Coordinating Council (Council) to include representatives from each state agency and department.

C. I hereby direct the Council to develop, implement, and augment programs, plans and policies that save money, prevent pollution and conserve natural resources throughout state government management and operations, including but not limited to source and waste reduction, energy efficiency, water conservation, recycling, fleet operations, environmental preferable purchasing, and establishing state-wide goals to save taxpayers' money and reduce environmental impacts.

D. I hereby direct State agencies and departments to provide all reasonable assistance and cooperation requested by the Council for the purpose of carrying out this order.

E. I hereby direct each State agency or department to annually submit to the Council a list of all projects implemented in accordance with this Executive Order in the previous calendar year and the resultant environmental benefits and cost savings.

To assist agencies in this effort, the Governor's Office of Energy Management and Conservation offers technical services to all State departments and agencies.

3. Duration

This Executive Order shall remain in force until further modification or rescission by the Governor.

GIVEN under my hand and the
Executive Seal of the State
of Colorado, this 15th
day of July, 2005.

Bill Owens
Governor

What is "Greening State Government"?

Greening of State Government is Executive Order D 005 05 from Governor Owens. Per this Order, state agencies will undertake a systematic evaluation of current business operations as they relate to the five categories identified in the Order. The categories are: energy efficiency, water conservation, recycling/waste reduction, environmentally preferable purchasing, and transportation.

Seven agencies have been pre-selected to begin the overall review of current practices. A process of cataloging successes will begin immediately. These seven agencies will **develop and implement policies and procedures that are based on improving and promoting environmentally sustainable and economically efficient practices towards the goal of operating and maintaining high performing buildings and staff.**

As processes and "best practices" are identified they will be shared with all agencies on a newly created "Greening Government" website. Additional agencies will be included as the overall project develops.

The Coordinating Council established by the Executive Order will develop, implement and augment programs, plans and policies that save money, prevent pollution and conserve natural resources throughout state government management and operations, and establish state-wide goals to save taxpayers' money and reduce environmental impacts. It is our goal to collect information from all state employees who have ideas to contribute to this process.

We believe state government can be a model for environmental leadership by implementing pollution prevention and resource conservation programs that not only enhance environmental protection, but also save taxpayers' money.

The Executive Order can be found at: http://www.colorado.gov/governor/eos/d00505.pdf

The Steering Committee members are, the Department of Public Health and Environment, the Governor's Office of Energy Management and Conservation and the Department of Personnel and Administration.

The seven pre-selected agencies are:
Department of Health and Human Services
Department of Transportation
Department of Labor and Employment
Department of Agriculture
Department of Personnel and Administration
Department of Public Health and Environment
Governor's Office of Energy Management and Conservation

Information About the Greening Government Executive Order

Overview

In recognition of state government's environmental impact and its potential to address a number of environmental and economic concerns, the Greening Government Executive Order, D005 05, was signed by Governor Bill Owens in July 2005. The Order calls on all state agencies to "develop and implement policies and procedures to promote environmentally sustainable and economically efficient practices," and establish a Colorado Greening Government Coordinating Council to include representatives from each state agency and department. The full executive order can be seen on the State's Greening Government website at http:///www.colorado.gov/greeninggovernment.

Structure

Staff at the Governor's Office of Energy Management and Conservation, the Colorado Department of Public Health and Environment, and the Department of Personnel and Administration coordinate the State Greening Government Program, while priority setting and implementation strategies are developed through the Greening Government Steering Committee (Committee) that meets on a monthly basis. The Committee shall meet periodically with the Greening Government Council (Council) and ask for feedback from the Council on recommendations that the Committee has developed for Greening Government activities. The Council is made up of representatives from all State agencies and key offices and will be responsible for reviewing all reports before they are sent to the Governor's office. A list of all participating agencies on the Council is available in Appendix 1 of this document.

Program Areas

A variety of subcommittees made up of Steering Committee Members, and staff from appropriate support agencies have been established to work on specific topic areas, including:

- Energy Efficiency
- Water Conservation and Water Quality
- Waste Reduction and Recycling
- Environmental Preferable Purchasing
- Transportation

Contacts

For more information on the Colorado State Greening Government Program or the contents of this guide please visit the State Greening Government website or contact one of the State Greening Government Program administrators:

Greening Government Website: www.colorado.gov/greeninggovernment

Susan Castellon, Office of Energy Management and Conservation, susan.castellon@state.co.us
Patrick Hamel, Colorado Dept. of Public Health and Environment, patrick.hamel@state.co.us
Richard Lee, Colorado Dept. of Personnel and Administration, richard.lee@state.co.us

Table of Contents

Section 1: Introduction and Background ……..1
Using the Planning and Implementation Guide…….
Environmental Concerns……
State Government Scope and Impacts……
Colorado State Greening Government Coordinating Council……
Defining Sustainability……...

Section 2: Greening Government Area Guidance……7
Introduction……

Program Area #1: Energy Efficiency……8
Introduction and Background…….
Benefits and Strategies……
Action Steps……

Program Area #2: Water Conservation and Water Quality…….12
Introduction and Background…….
Benefits and Strategies……
Action Steps……

Program Area #3: Waste Reduction and Recycling……16
Introduction and Background……
Benefits and Strategies……..
Action Steps……..

Program Area #4: Environmentally Preferable Purchasing……20
Introduction and Background……
Benefits and Strategies……..
Action Steps……..

Program Area #5: Transportation……24
Introduction and Background……
Benefits and Strategies……..
Action Steps……...

Section 3: Agency Greening Government Planning……27
Greening Government Planning Road Map…….28
State Greening Government Coordinating Council…….37
Agency Greening Government Plan Template…….38
Greening Government Workplan Worksheet……...42
Greening Government Indicators…….43
Greening Government Tracking Forms……44
Greening Government Organization Chart and Roles and Responsibilities……49

Introduction and Background - Section 1

Using the Planning and Implementation Guide

The Guide is designed to help agencies understand the environmental and public health impacts of their day-to-day decisions and actions, and is intended to provide agencies with broad-based goals and specific actions that they can take to initiate greening government efforts, while still providing necessary services and ensuring efficient and effective operations.

It is important to note that many of the strategies and actions recommended in the Guide can be implemented at little or no additional cost to an agency, while using existing staff and resources. Additionally, other strategies and actions that may have an upfront cost often reduce the operational costs of an agency, resulting in overall savings within a short time frame. When prioritizing strategies and actions for implementation, agencies should take into account the over-all cost of each activity and initially select those based on the best payback period, potential environmental impacts and ease of implementation.

This Guide is a living document and will be updated periodically by the State Greening Government Administrative Committee, either to provide up to date information for existing sections or add new sections on new topics. New sections will be posted on the State website, www.colorado.gov/greeninggovernment.

This Guide consists of three primary sections:

1. Introduction and Background – information on environmental issues of concern, sustainability principles and the rationale for establishing a state greening government program.
2. Greening Government Area Program Guidance – Five topics describing specific environmental impacts and issues associated with human activity, long-term goals for state government, and specific strategies and action steps that agencies should take, where appropriate, to achieve environmental and economic improvements. The topics include:
    - Energy Efficiency
    - Water Conservation and Quality
    - Waste Reduction and Recycling
    - Environmental Preferable Purchasing
    - Transportation
3. Agency Greening Government Planning – a step-by-step guide to help agencies initiate and manage greening government plans and implement internal greening government programs.

Agencies should use the Guide to help them develop greening government efforts and plans, but should also incorporate their own ideas into their programs. It is critical that agencies establish an ongoing process through which their efforts can be reviewed and improved upon.

Environmental Concerns – Background

It is becoming increasingly clear that our society faces many environmental issues locally, regionally, nationally and even globally. From concerns over climate change, to drought-related water shortages, to air quality in cities and towns, it is clear that environmental issues affect the quality of life in our communities and around the country.

Global Issues

- Sea level has risen 4 to 8 inches over the past century.
- The last ten years (1996-2005), with the exception of 1996, are the warmest years on record.
- A federal study released in 2005 by the National Center for Atmospheric Research stated that climate change could thaw the top 11 feet of permafrost in most areas of the Northern Hemisphere by 2100, altering ecosystems across Alaska, Canada and Russia.

Regional Issues

- Tight water supplies in the west will continue to challenge communities in the region who are in competition for water for their residents, industry and agriculture.
- Noxious weeds and invasive plant species pose an increasing threat to native ecosystems, croplands, and other plant communities throughout the United States. On Federal lands in the Western United States, it is estimated that weeds occur on more than 17 million acres, with similar infestations occurring in Canada and Mexico. (USFS)
- Americans generate over 230 million tons of waste per year, about 4.5 pounds per person per day, up from 2.7 pounds per person in 1960. (EPA)

Local Issues

- Colorado residents generate about 6.1 pounds of waste per person per day, almost 2 pounds higher than the national average.
- Colorado's Fraser River is listed on American Rivers' top 10 endangered rivers in the country. Denver Water currently takes 65% of the water from the Fraser and has plans to increase the rate to 85% so it can feed the growth of Colorado's Front Range communities.

State Government Scope and Impacts

By its very nature, the activities of state government in Colorado are varied and far-reaching. From provision of medical care and higher education, to operation of parks and recreation areas, to road and building maintenance, Colorado agencies are involved in numerous activities ranging from purchasing, waste management, and building and operations, all of which consume resources and impact our environment. In addition to these operational activities, the state manages millions of dollars of road construction each year.

As one of the largest employers in the state, government is responsible for overseeing:

- Over 60 million square feet of property
- Over 5,000 buildings
- Over 9,100 miles of highways
- 22 prison facilities with some 14,000 prisoners
- Over 5,200 light and heavy duty vehicles that travel over 72 million miles

The environmental impacts associated with the construction, maintenance and operations of these facilities are significant:

Examples of Operational Environmental Impacts

Agency Activity	***Environmental/Health Impacts***
Energy consumption to heat and cool buildings and power appliances and equipment. Fuel for vehicles.	Greenhouse gas emissions and other air emissions that effect air quality
Day-to-day operations and public activities on state land, from office operations to state parks	Solid waste generation, incineration emissions, mercury emissions, open space for landfills.
Operation of labs, medical facilities, vehicle maintenance and print shops	Hazardous waste generation, indoor air quality
Water consumption for drinking, washing, and landscape management	Ecosystem and habitat impacts, water quantity and quality
Pest management in state buildings and along roadways to control insects, vermin and weeds	Ecosystem impacts, water quality and indoor air quality

While specific data on actual environmental impacts from state government activities are still being collected, information gathered so far demonstrates that state government impacts are significant and that government efforts can play a key role in statewide efforts to reduce environmental and health effects. In fiscal year 2005, state agencies were responsible for:

- Traveling over 72 million miles in state vehicles
- Burning over 4.2 million gallons of fuel, this equates to releasing over 4,200 tons of Carbon dioxide into the atmosphere.

In addition to the environmental impacts associated with the above activities, Colorado state agencies spend millions of dollars per year on the day-to-day management of their facilities. In fiscal year 2005, agencies spent the following:

Amount Spent	***Operational Activity***
$38,000,000	Electricity
$8,322,800	Vehicle Fuels
$10,440,000	Water and Sewer Costs

Colorado State Greening Government Coordinating Council

In recognition of state government's environmental impact and its potential to address a number of environmental concerns, Executive Order D 005 05 established the State Greening Government Coordinating Council in July 2005. The Order calls on all state agencies to "develop and implement policies and procedures to promote environmentally sustainable and economically efficient practices".

The Greening of State Government Executive Order focuses on state agency operations and activities in order to:

- Address the environmental and health impacts associated with agency activities
- Make government more efficient and reduce operating costs
- Incorporate long-range environmental planning into day-to-day operations
- Establish state government as a model for other sectors
- Help ensure that future generations of Colorado citizens enjoy a quality of life at least as high as today's

A State Greening Government Administrative Committee, made up of representatives from the Office of Energy Management and Conservation, Colorado Department of Public Health and Environment and Colorado Department of Personnel and Administration, directs the program and coordinates efforts with all agencies. The Council meets regularly to review recommendations from the Steering Committee on the five greening government program areas, and decides on priority activities that state agencies should be taking for improving the environment and saving state funds. Each member of the Council will have a greening government team at their agency that will help in the implementation of agreed upon projects. For more information on Greening Government, go to: www.colorado.gov/greeninggovernment.

Defining Sustainability

It is important that state agencies understand how greening government activities will lead to a long-term goal of having a sustainable Colorado and that agencies have a common understanding of what sustainability means.

Sustainability has many definitions but the most commonly accepted definition comes from the 1987 World Commission on Environment and Development Brundtland Report:

Meeting the needs of the present generation without compromising the ability of future generations to meet their needs.

While working to achieve a sustainable Colorado through greening government activities, agencies need to think about their activities with the context of the following long-term goals and principles:

Using Resources and Materials Efficiently and Wisely

- Produce electricity from renewable sources
- Ensure that buildings and vehicles are the most efficient possible
- Recycle the majority of solid waste and minimize total waste generated
- Generate virtually no hazardous waste
- Ensure that local water bodies and water supplies remain of high quality and are not depleted beyond nature's ability to manage and replenish ecosystems

Using Purchasing Power to Protect the Environment

- Buy products that do not contain mercury or other persistent bio-accumulative toxins (PBT's) e.g. lead, mercury, PCB's and dioxin
- Ensure that new, and renovated buildings and roadways are constructed in ways that minimize impacts on the surrounding environment
- Make purchasing, management, and operational decisions based on life-cycle costs that incorporate the true environmental costs as well as short-term and long-term economic impacts

Promoting Sustainable Decision Making Processes

- Make staff aware of environmental and health issues as part of their normal routines
- Ensure that long-term environmental, health, and economic impacts are incorporated into decision making-processes

Greening Government Area Guidance - Section 2

Introduction

The areas in which state agencies can implement greening government practices are many and varied. From the water and energy consumed, to the solid waste generated, and the type of vehicles we drive for work, day-to-day government operations have an impact on the local, regional and even global environments. This section provides information and potential actions in five key environmental areas.

While these areas are not meant to be exhaustive of all the possible environmental and economic impacts associated with government activities, the Greening Government Steering Committee has chosen them as priority areas where impacts are significant and possible actions can be quickly implemented. The agency strategies and action steps listed in this section are meant to guide agencies, however, agencies should use their own planning process to develop additional priority actions relevant to their own activities and operations.

Each program area (energy efficiency, water conservation/quality, waste reduction and recycling, environmental preferable purchasing and transportation) is broken into four sections as follows:

1. Introduction and Background
2. Environmental and Economic Benefits
3. Existing Efforts
4. Goals, Strategies (Statewide and Agency specific), and Action Steps

Sections 1 through 3 are designed to provide background on the issues, information on the associated health and environmental impacts, and a summary of possible benefits resulting from improved performance. Section 4 consists of several components, which include:

- Statewide strategies that will help agencies in their efforts
- Agency strategies that may necessitate a change in agency policy or management practices
- Specific action steps that agency staff can use over the short term to begin implementing greening government practices quickly, often at little or no cost.

Not all of the strategies or actions listed will be appropriate for all agencies – for example, a small satellite office renting space should not focus on building energy efficiency efforts, nor should a vehicle maintenance garage focus on paper recycling. However, all agencies should at least consider each suggestion carefully to determine which ones are applicable and feasible. While each program area has its own issues and strategies, agencies should make sure to address environmental and health impacts as well as cost savings strategies in a coordinated fashion. For example, it does not make sense to eliminate one type of toxic waste only to generate another, or to promote energy

conservation at the expense of indoor air quality. All of these issues should be considered within a broader environmental and planning context.

While the list of issues and action may seem overwhelming, it is important to remember that achieving a sustainable government is a long-term goal that relies on continual improvement in how agencies conduct their day-to-day activities. Agencies should identify their most significant environmental and health impacts, examine the feasibility and cost-effectiveness of addressing these impacts, and prioritize their actions accordingly.

Program Area 1: Energy Efficiency

I. Introduction and Background

Technological advances in all types of energy-using equipment, from motors to boilers to lights, enable the equipment to perform while using less energy. One stellar example of this is the compact fluorescent lightbulb which can deliver the same amount of light as the conventional incandescent bulb while using 75% less energy, and it lasts 10 times longer so easily pays for itself in the first year of its lifetime then keeps on saving for the remaining years.

Buildings represent the main energy-user in state government so the recommendations below are directed toward new and existing buildings as well as grounds.

II. Environmental and Economic Benefits

Reducing energy use provides many economic, environmental and other benefits.

Cost savings of 25 percent can often be achieved by implementing cost-effective equipment replacements and operational strategies. This goes right to the bottom-line of state department utility budgets and enables the state to re-direct funds that otherwise are paid to utility companies. Reducing energy costs also mitigates the future impact of volatile energy prices and fuel price escalation. The state uses $38 million in energy per year (2004-05 figures for state departments), so a 25% reduction will save $9.5 million per year in funds that can be freed-up to meet other budget needs. In fact, the savings can be used to pay for the projects through an innovative approach called performance contracting, where annual savings are guaranteed to meet the finance payments within the lifetime of the equipment. The State has already taken significant steps in this direction, particularly under Executive Order D 014 03, Energy Performance Contracting to Improve State Facilities, which requires state departments to initiate performance contracts as feasible.

There are many opportunities for increased efficiency in new buildings, where a 30% reduction in energy costs can result from better design without expanding the design/construction budget.

Reducing energy use also goes to the environmental bottom line, reducing the demand on our natural resources for fuel supplies. These energy savings improve air quality by reducing air emissions from electrical power plants and on-site fuel combustion. A 25% reduction in energy use is the pollution-prevention equivalent of taking 11,000 cars off the road each year.

Economic benefits also result. Besides cutting utility costs, implementing energy-saving projects is a boon to the Colorado economy. For each $1 in performance contracting projects, $0.40 is pumped into the local economy according to the National Association of Energy Service Companies, 2003. Also, several studies suggest that four to five jobs are created for every $1 million in energy investment.

The quality of energy efficient equipment and the effective operation results in improved comfort in the buildings for occupants – better lighting, better temperature control, adequate fresh air, reduced noise from equipment operation, etc. Studies show this improves worker productivity and attendance.

III. Existing Energy Efficiency Efforts

- The Department of Corrections through its Energy Management Program avoids $1.8 million in annual costs (10 percent of its utility budget) and is planning additional facility improvements that could result in avoided annual costs exceeding $1 million.
- The Department of Human Services through its aggressive program to manage its $5.3 million annual utility budget achieved a 10 percent level of cost avoidance.
- The Department of Human Services is also in the construction phase of a performance contract that will avoid an additional $1,000,000 in annual utility costs.
- The Department of Personnel and Administration, with the Judicial Department and the Department of Labor & Employment, is using performance contracting for a large-scale, comprehensive project that captures $700,000 in annual reductions to pay for $14 million in facility upgrades.
- The Department of Military Affairs is demonstrating how re-commissioning (technical building tune-up) can improve the efficiency of four of its facilities.

IV. Energy Efficiency Statewide Strategies

- The Energy Efficiency Subcommittee should provide information resources to agencies to help the identify, assess, and implement energy conservation opportunities – such resources/tools include:
  - -Websites
  - -Guides and fact sheets
  - -Technical support from OEMC.

V. Energy Efficiency Strategies

To help reach energy efficiency goals, agencies should:

- Contact OEMC to get technical assistance in identifying and implementing cost-effective approaches, and utilizing innovative financing approaches with available utility rebates to pay for the projects.
- Use performance contracting to initiate and implement large-scale, comprehensive energy-saving projects in all your facilities.
- Adopt the United States Green Buildings Council's Leadership in Energy and Environmental Design Green Building Rating System for Existing Buildings (LEED-EB) in operating, maintaining and managing existing buildings, to the extent applicable and practicable.
- Incorporate LEED for New Construction (LEED-NC) practices to design energy and resource efficient new buildings, to the extent that this is deemed cost-effective.
- Require commissioning to ensure new construction projects function as designed.
- Initiate an energy management program to monitor and manage utility usage and costs, as resources become available. The first step is to collect gas and electricity data. OEMC intends to launch a program to aid departments in this effort in Fall 2006.

Action steps for energy efficiency opportunities

- Turn off lights in offices, conference rooms, kitchens, etc., install motion detectors in rooms that are not used regularly.

- Replace inefficient incandescent lights with more efficient alternatives, such as
    - LED exit signs: Replacing one incandescent sign can save 20-30 watts.
    - Compact fluorescent lamps (CFL): Replacing a 100-watt incandescent lamp with a 27-watt CFL saves over $60 over the life of the bulb.

- Install vending misers on soda machines: Installing a motion sensing vending miser will save over 40% in energy cost, de-lamping the soda machine can save an additional 20% for a total of 60% savings without losing any performance on the machine.

- Use your sleep setting on your computer. Set your monitor to go to sleep if it is not being used for over 20 minutes, monitors typically use over half the energy in your computer system.

- Consider replacing your old CRT monitor with a new LCD monitor. LCD's use about a quarter the energy, have much less toxic material in them, and last longer than a CRT.

- Operate equipment only when needed: Perform night and weekend audits to discover what equipment is operating that could be turned off (e.g., bathroom lights, desk lights, fans, printers, copiers, etc.).

Program Area 2: Water Conservation and Water Quality

I. Introduction and Background

Water is consumed by all sectors of society, from agriculture, to industry, to commercial and residential communities. It is used to sustain human life, grow plants, wash our bodies, cars, and buildings, sustain our landscapes, and keep machinery running. Though 70% of the earth is made up of water, only 1% of this water is fresh and available for consumption. The consumption of water continues to grow at a surprising rate—during the 20th century, global demand for water increased six-fold, double the rate of population growth.

Water is obviously a precious resource in the arid west. Not only do we consume water, but in the use of water we also create water pollution that must be treated before it can be reintroduced into the natural water system. As was evident over the recent past, Coloradoans are becoming more aware of the need to protect and conserve our water resources for the sustainability of our ecological systems, agricultural industry, tourism, and quality of life in Colorado.

Activities by state agencies use significant amounts of water throughout the state. Drinking water and washroom water is consumed by tens of thousands of employees, clients, visitors, and patients every day. Outdoor use of water for landscaping at thousands of state buildings, parks, athletic fields, and golf courses also contributes to significant water usage.

II. Environmental and Economic Benefits

Reducing our water consumption and minimizing our impacts to water quality, provides both economic and environmental benefits for Colorado and state agencies. Governor Owens a few years ago asked state agencies to review water usage and find ways to reduce consumption rates. Conservation of water through the use of more efficient equipment, changes in behavior, and improved maintenance has the potential to save significant environmental and fiscal resources. The US Environmental Protection Agency estimates that through the installation of water efficient equipment and integration of water efficient practices into everyday operation, a 30% reduction in water consumption is possible. Payback periods for implementing water demand reduction measures at institutional, industrial, and commercial facilities are generally low, between 1-4 years, with an average payback period of less than 2.5 years. There are also secondary cost benefits to conserving water, such as reductions in energy use to heat water and reductions in costs to treat and dispose of water.

A water conservation and quality improvement program can:

- Reduce energy usage for treatment of wastewater;

- Reduce the need for chemical treatment for a cooling towers;
- Possibly reduce capital costs to the extent that new infrastructure to meet future needs is deferred, eliminated, or reduced;
- Protect the health of water bodies, wildlife, and habitats in Colorado;
- Result in changing design plans for development or redevelopment projects;
- Minimize stormwater runoff from development projects carrying elevated pollutant concentrations and loadings that can infiltrate groundwater or spill into surface waters.

III. Existing Water Conservation and Water Quality Efforts

- The State Laboratory has installed motion sensors for all of its restroom hand sinks.
- The State Laboratory has begun to convert their landscaping from Kentucky Bluegrass to native plants and ground cover such as Blue Grama grass and woodchips.
- CDPHE has install flow restrictors on all toilets to reduce the amount of water used during each flush.

IV. Water Conservation and Water Quality Statewide Strategies

- The Water Conservation and Quality Subcommittee should provide information resources to agencies to help the identify, assess, and implement water conservation and water quality opportunities – such resources/tools include:
  - -Websites such as www.ourwater.org and www.greenco.org
  - -Guides and fact sheets
  - -Water conservation resources
  - -Water audit checklists and guidelines (Denver Water will audit customers for free.
- The Water Conservation and Quality Subcommittee should work with the Department of Personnel and Administration to identify and offer water-efficient equipment and appliances on relevant state contracts, and should provide employee outreach to educate employees on all available water saving alternatives.

V. Water Conservation and Water Quality Agency Strategies

To help reach water conservation and water quality goals, agencies should:

- Use existing data (water/sewer bills) to prepare a summary of the volume and cost of water being consumed and to look for trends, patterns, and unexplained increases that could indicate leaks or inefficient use of water.

- Conduct water audits in large facilities or facilities with high outdoor water use – audits may be conducted by Denver Water or by hiring a consultant to identify measures where the greatest efficiencies and potential savings can be realized.

- Estimate cost and water savings for potential conservation measures, to prioritize projects' cost effectiveness.

- Replace plumbing fixtures that do not meet the following criteria:

    - Toilets: 1.6 gallon per flush
    - Urinals: 1.0 gallons per flush or try installing waterless urinals
    - Lavatory faucets: Low flow faucet aerators 1.0 gallons per minute
    - Shower heads: Low flow 2.5 gallons per minute

- Gradually phase out high water use landscapes at state run facilities. Change over to xeriscape plants such as Blue Grama Grass and Fine Fescues. For a great resource visit the Colorado State Cooperative Extension at: http://www.ext.colostate.edu/menuwater.html

- Minimize the amount of fertilizers applied to landscaping. Excess fertilizer will run off into state waterbodies.

- Be a creek steward. Have your agency adopt a stretch of creek and commit to cleaning up debris from it at least 2 times per year.

- Stencil around storm drains so people are aware that the water that enters this drain goes directly to waterways without being treated.

Action steps for water quality and water conservation improvements

A variety of short-term actions state facilities can take to reduce their environmental impacts.

- Implement a water conservation awareness and outreach program
  - Solicit employee ideas through surveys or suggestion boxes.
  - Place stickers in restrooms encouraging water conservation
  - Have employees use water conservation and water quality training modules available at www.co.train.org
  - Highlight water conservation measures for employees and general public

- Reduce non-essential water uses, especially during periods of drought. Non-essential water uses include, but are not limited to: vehicle washing (unless necessary for operator safety), decorative fountains that do not re-circulate water, routine watering of athletic fields and other identified by specific agency.

- Routinely inspect and repair any leaking water lines as well as pumps, valves and faucets.

- Focus on restroom water use, which is often up to 50% of water demand at institutions:

  - Replace old toilets that use 3.5 to 5.0 gallons per flush with 1.6 gpf units.
  - Install water saving aerators on faucets and other plumbing fixtures.
  - Check system pressure and install pressure-reducing valves to reduce water consumption.

- Limit lawn watering to hours when evaporation is lowest – early in the morning or later in the evening to maximize absorption and minimize evaporation.

- Plant drought tolerant native plants and grasses in existing landscapes to reduce irrigation needs.

- Eliminate once-through cooling systems.

- Don't wash lawn clippings or leaves down storm drains. Yard waste can clog storm sewers as well as add excess organic matter to local water resources.

- Consider hand pulling of weeds, especially before seeds are produced. This will keep chemical pesticides out of stormwater.

Program Area 3: Waste Reduction and Recycling

I. Introduction and Background

Nearly everything we do creates some type of waste. Waste can be considered lost resources, and in today's world of ever decreasing natural resources we must find ways to decrease our waste generation in order to become a more sustainable society.

In 2004, residents of Colorado generated over 7.5 million tons of solid waste, an increase of approximately 60% from 1995. The Environmental Protection Agency estimates that each Coloradoan generates 6.1 pounds of waste per person per day and that the national average for waste generation is 4.5 pounds per person per day. As you can see, Colorado is behind the national average and has many opportunities for improvement. One of the reasons for Colorado having a higher waste generation rate is the fact that we have some of the lowest solid waste tipping fees in the country. Colorado's tipping fees are 3 to 4 times less than those in the northeast and Atlantic coast and in turn this creates a greater challenge for waste reduction and recycling due to economic factors.

With thousands of employees in state government, and facilities that service hundreds of thousands of customers, state operations generate thousands of tons of waste every year. It is the responsibility of the state to take a leadership role in reducing the amount of waste we generate and to increase the amount of material we recycle in an efficient, economical way.

II. Environmental and Economic Benefits

Reducing our waste, and recycling what waste we do generate, provides both economic and environmental benefits for Colorado and state agencies. A strong waste reduction and recycling program can:

- Reduce the extraction of natural resources and minimize the associated environmental impacts – Waste prevention and recycling of paper products allow more trees to remain standing in the forest, where they can continue to remove carbon dioxide from the atmosphere.
- Save energy and water through the utilization of recycled materials in manufacturing processes – Recycling one aluminum can saves enough energy to power the average TV for 3 hours.
- Preserve open space by eliminating the need for more disposal capacity and save local governments money by reducing the need to construct more sanitary landfills.
- Protect air and water resources by reducing emissions from the generation of landfill gas, minimize surface water run-off, and reducing generation of leachate which must be managed and treated from landfills.

- Save money through the reduction of unnecessary equipment and supply purchases by re-using existing supplies.

By implementing successful waste prevention programs, agencies can avoid disposal costs altogether (leasing rather than purchasing equipment). A comprehensive prevention program can also benefit from cost savings associated with not purchasing a product in the first place. The Colorado Department of Public Health and Environment recently reduced the number of copiers they were leasing from 31 to 28 saving approximately $13,000 per year in the process. Waste management contracts can also be restructured to include more recycling services; many times this will reduce the amount state agencies pay for waste disposal.

III. Existing Waste Reduction/Recycling Efforts

- The Colorado Department of Public Health and Environment currently recycles the following materials: Glass, Aluminum, Plastic #1 and #2, Newspaper, Magazines, Office Paper, Phonebooks, Cardboard, Paperboard, Junkmail, Batteries and Cell Phones.

IV. Waste Reduction/ Recycling Statewide Strategies

- The Waste Reduction/Recycling Subcommittee should compile relevant resources to assist agencies in developing waste reduction programs including:
  - Case studies and fact sheets on waste reduction/recycling
  - Sample policies and programs
  - Educational Materials
  - List of resources to assist with waste reduction/recycling programs
  - Technical assistance and incentives
  - Model recycling specifications for contracts and lease agreements

- The Department of Personnel and Administration should disseminate information about any recycling/solid waste contracts that may be accessed to assist and improve agency waste reduction programs.

- The Department of Personnel and Administration should work with the Waste Reduction/Recycling Subcommittee to ensure that reporting requirements for vendors are included on statewide recycling/solid waste contracts. This will help agencies with tracking and reporting solid waste and recycling numbers.

- The Department of Personnel and Administration should work with the Waste Reduction/Recycling Subcommittee to examine the state's surplus property program and ensure equipment and furniture is reused or recycled to the maximum extent possible. The Waste Reduction/Recycling Subcommittee should also review other common office supplies that get sent to the landfill and determine if there is a potential market for these items to go to non-profit organizations instead.

V. Waste Reduction/Recycling Agency Strategies

To help reach waste reduction/recycling goals, agencies should:

- Consider conducting a waste assessment to identify the types and amounts of waste generated at your facility.
    - Use this assessment to establish a baseline for the amount of waste you generate (volume and costs of waste management)
    - Use this assessment to determine if there are items that go to the landfill that can easily be recycled.
    - Establish waste reduction/recycling goals based on your findings in the waste assessment.

- Waste Assessment Resources:
    - WasteWise has information on how to conduct a waste assessment at www.epa.gov/wastewise/ You will need to join EPA's WasteWise program in order to use their guidance materials-membership is free.

- Each agency should make information available to employees on how they can reduce and recycle waste generated in their homes and away from the office.

Action Steps to Waste Reduction and Recycling

A variety of short-term actions state facilities can take to reduce their environmental impacts.

- Establish and promote a double-sided printing policy to ensure that internal and external documents are printed 2-sided.

- Require RFP bid submissions to be double-sided and ask for them without extraneous materials.

- Establish designated office supply reuse centers or areas in offices to allow for unused or reusable supplies to be available, such as:

    - Binders, file folders, staplers, paper clips, pens, notepads, in boxes, and other supplies.
- Initiate a paper reduction campaign:
    - Measure paper purchases/use and set a goal for reduction.
    - Establish procedures with your local printer or print shop so that all documents from your agency are printed/copied double sided.
    - Have your agency convert personnel forms and leave slips to an electronic system

- Utilize the web and other electronic media for distribution of documents and miscellaneous materials. For example:
    - Use e-mail distribution lists.
    - Store timesheets, invoices, and stationary electronically
    - Provide newsletters to staff electronically rather than making hard copies to distribute

- Distribute information on how to reduce the amount of junk mail received within the agency and at home. Visit http://www.dmaconsumers.org/cgi/offmailinglist#moreinformation to get your name on the "do not mail list".

- Lease equipment or supplies when possible to reduce waste and save money on disposal cost.

- Review policy for the replacement of computers and monitors. Monitors are often replaced prematurely. By replacing them less often you can many times upgrade from CRT to LCD monitors that last longer, have much less toxic material in them and are easier on the eyes.

- Focus your recycling program on the most commonly generated materials at your facility – these materials can be identified through a waste assessment and will provide the biggest "bang for your buck" when initiating a new program.

- Choose appropriate recycling bins for specific materials, and place them in appropriate locations at the facility:
    - Placing recycling bins near trashcans reduces the likelihood that employees will throw trash into the recycling bin.

- Place large, clear signage in appropriate locations throughout your facility to increase employee awareness of your recycling program.
- Publicize your recycling data results to your employees so they know how they are doing. Challenge employees to continually improve their recycling rate every year.

Program Area 4: Environmentally Preferable Purchasing (EPP)

I. Introduction and Background

Environmentally Preferable Purchasing (EPP) is the purchase of environmentally preferable products. Environmentally Preferable Products are usually defined as products and services that have a lesser or reduced effect on human health and the environment when compared to competing products and services that serve the same purpose. Such products or services may include, but not be limited to, those that contain recycled content, minimize waste, conserve energy or water and reduce the amount of toxics either disposed of or consumed.

The overall goal of EPP is to increase demand and develop markets for products that reduce, minimize, and even eliminate environmental and health impacts associated with the manufacture, use, and/or disposal of such products. In doing so, the intent is to promote increased production of Environmentally Preferable Products, expand their availability, improve their performance, and reduce their cost. In recognition of the enormous purchasing power of all levels of government, equaling approximately 20% of U.S. Gross National Product, governments across the country are now involved in EPP.

II. Environmental and Economic Benefits

Environmentally Preferential Purchasing can reduce the environmental and health impacts associated with products, ranging from conservation of natural resources, to reductions in energy consumption, to elimination of toxic materials such as mercury from the waste stream. These impacts directly and indirectly relate to the quality of life in Colorado. For example, by reducing the purchase of mercury-containing products such as thermostats or thermometers, less mercury ends up in landfills and incinerators, reducing the deposition of mercury in local fish and waterways. By purchasing recycled paper, trees are conserved, and less energy is needed to manufacture new paper, resulting in environmental benefits and reuse of materials.

Implementing EPP can also result in direct economic savings as well as contribute to the local economy. Some products and services actually cost less to purchase than their non-EPP counterparts (e.g. remanufactured toner cartridges), while others cost less to maintain or operate due to lower costs over the product's life (e.g. energy efficient office equipment), while others may reduce costs through avoidance of risk or reduced disposal costs (e.g. costs associated with mercury spills or disposal of mercury containing products). In Colorado, buying recycled products can create markets for materials collected through local recycling programs, thereby reducing the costs of those programs. Local companies that produce and sell Environmentally Preferable Products generate revenue and jobs for the local economy.

State government purchases of Environmentally Preferable Products can result in significant environmental and economic savings, including:

- Energy efficiency;
- Conservation of natural resources;
- Educing materials sent to landfills;
- Cost savings;
- Local job creation and revenue generation;

III. Existing Environmental Preferable Purchasing Efforts

- The Department of Labor and Employment (DLE) recently completed and began implementing an EPP policy for their department that covers all cleaning products.
- All state agencies are required that 50% of their paper purchases have at least a 30% recycled paper content. (Act 24-103-207)

IV. Environmental Preferable Purchasing Statewide Strategies

The Department of Personnel and Administration should incorporate Environmental Preferable Purchasing into their process to reduce the environmental and health impacts associated with purchasing, reduce costs wherever possible, and increase operational efficiency. As part of such efforts, the Department of Personnel and Administration should:

- Increase the selection of environmentally preferable products on statewide contracts and eliminate non-EPP alternatives wherever feasible and cost-effective.
- Develop language for agencies to use that will help them incorporate EPP specifications into service contracts and grants over $50,000.
- Designate one person to stay abreast of EPP issues, receive ongoing information, such as the EPP newsletter and disseminate such information to appropriate agency personnel.
- Participate in EPP conferences, other related workshops and training, and appropriate awards and recognition programs.
- Track and report statewide EPP purchases/activities.
- Train agencies and raise awareness of the availability and performance of environmentally preferable products, the environmental and health benefits and cost saving opportunities associated with EPP. Such efforts should include:
- Development of guides and fact sheets online for purchasing staff to review.
- Provide online case studies to show effectiveness of products and cost comparisons.
- Provide assistance to agencies in writing RFP’s so they include EPP as an element.

V. Environmental Preferable Purchasing Agency Strategies

To help reach environmentally preferable purchasing goals, agencies should:

- Purchase Environmentally Preferable Products whenever they are equal in performance and cost-effective based on the product's life-cycle cost, which includes the purchase, operating, and disposal costs associated with purchases made through statewide contracts, department agreements, incidental, and credit card purchases.
- Purchase and evaluate new Environmentally Preferable Products periodically and/or participate in Environmentally Preferable Product testing opportunities.
- Identify the most significant purchases made on an annual basis and take steps to ensure that the products contain EPP criteria wherever possible and effective.
- Participate in EPP conferences, other related workshops and training, and appropriate awards and recognition programs.

Action Steps to Environmentally Preferable Purchasing

A variety of short-term actions state agencies can take to reduce their environmental and economic impacts.

- Save money by purchasing EPP products that cost less, including, but not limited to:

    - Remanufactured toner cartridges
    - Remanufactured office panels
    - Retread tires
    - Recycled mulch
    - Recycled antifreeze
    - Recycled plastic traffic cones

- Conserve energy and reduce electricity costs by purchasing energy efficient office equipment, appliances, lighting fixtures, LED exit signs, and other items.

- Purchase durable products that do not have to be replaced often, such as plastic lumber furniture, decking, planters, and other recycled plastic outdoor products. Reduced maintenance and replacement costs over the product's life often offset any additional purchasing costs.

- Reduce potential liability, health risks, and clean-up costs, by purchasing less or not toxic products. Examples include:

    - Bio-based lubricants, especially for landscaping equipment near sensitive areas where oil leaks could be substantially damaging (e.g. golf courses, wells, rivers, etc.)
    - Mercury-free thermometers, barometers, thermostats and blood pressure cuffs. Disposal of mercury can run thousands of dollars.
    - Green cleaning chemicals that are less harmful to janitorial staff.

- Consider leasing expensive equipment (e.g. large copiers, computers) to avoid up-front costs, incorporate ongoing maintenance and upgrades, and eliminate disposal costs.

- Ask all bidders to submit proposals on recycled paper, double sided copies, and without extra materials not requested. This helps to promote recycled paper markets, reduce vendor-mailing costs and minimize agency file storage needs.

- Use bulk purchasing of EPP's to reduce product costs. For example, recycled copy paper costs decrease when you buy in large quantities.

Maximize the productivity and comfort of staff, visitors and clients by purchasing products that improve indoor air quality. Buy less toxic cleaners, carpeting and paints with low volatile organic compounds and use integrated pest management strategies to minimize pesticide application.

Program Area 5: Transportation

I. Introduction and Background

According to the U.S. EPA, driving a car is the single most polluting thing that most individuals do. Motor vehicles emit millions of tons of pollutants in the air each year. In many urban areas, motor vehicles are the largest contributor to ground level ozone, a major component of smog. Cars also emit several pollutants classified at toxics, these toxics are suspected of contributing to over 1,500 cases of cancer each year in the United States. The burning of fossil fuels also contributes to the release of Carbon Dioxide (CO2) into the atmosphere, which many scientists believe contribute to the warming of the planet and can have an effect on global weather patterns. These changes in weather patterns can alter regional precipitation totals and effect crop yields, water supplies and recreation opportunities such as skiing and rafting. Scientists currently are unable to determine which parts of the United States will become wetter or dryer, but there is likely to be an overall trend toward increased precipitation and evaporation, more intense rainstorms, and drier soils.

Pollution control measures have drastically reduced emissions from vehicles in the past 20 years, however, during that same time the total miles traveled has doubled, resulting in higher levels of air pollutants in many parts of the country. In 2005, the State of Colorado's fleet alone burned over 4.2 million gallons of fuel in its vehicles, leading to the addition of 84 million pounds of CO2 being released into the atmosphere.

We believe this provides a great opportunity for state government to lead by example and reduce the amount of petroleum products we use through the purchase of more fuel efficient vehicles, the use of alternative fuels, and the introduction of a variety of transportation alternatives for employees.

II. Environmental and Economic Benefits

The increase in gas and diesel prices can be a strain on State Fleet budgets as well as agency budgets. During 2005, state fleet spent over $8.3 million dollars on fuel. This jump in fuel cost will lead to an increased variable charge for agencies that lease their own vehicles. Alternative fuels such as biodiesel and ethanol have become much more competitive with the price of conventional petroleum products and have considerable reductions in emissions. The production of alternative fuels in Colorado will help to stabilize the price of these fuels and in turn help to budget for our future fuel needs.

Many studies have shown that hybrid vehicles will have a cost savings over the lifecycle of the vehicle when compared to conventional automobiles. By

removing 20 Jeep Liberty SUV's from the State Fleet and replacing them with Honda Civic Hybrids, the State could save approximately $17,000 in fuel cost each year and reduce CO2 emissions by 148,000 pounds per year. (Based on 12,500 miles/yr at $2.29/gallon, Jeep 20mpg, Civic 49mpg).

This is just one example of how state agencies can start to save money on fuel costs and reduce emissions from their transportation use. Every state agency should keep in mind the environmental and fiscal impact when they are choosing a vehicle for purchase. A simple rule is to purchase a vehicle with the best fuel economy available that still meets your agency's needs. By looking into what you use your vehicle for the most, you will often find that you don't always need to buy a 4x4 to meet your needs.

III. Existing Transportation Strategies

- The state has purchase 23 hybrid vehicles over the past 5 years and has many more on order for FY '06.
- The state currently has 378 vehicles that are capable of running on E-85 and we are working with an E-85 coalition to increase the availability of these pumps in the state.
- The state currently has 37 vehicles that are capable of running on a 20% biodiesel blend (B-20), and will be researching how to begin to use this renewable fuel in its vehicles.
- The state has the new Jeep Liberty diesel on its bid list; this vehicle gets approximately 20% better fuel economy than the conventional Jeep and comes from the factory with a biodiesel blend of fuel.
- Some state agencies provide preferred parking to individuals who drive hybrid automobiles or who carpool to work.

IV. Statewide Strategies to Increase the Efficiency of Transportation

- Purchase cleaner burning vehicles, EPA Tier II, Bin 5 or better.
- Set a goal to reduce the number of SUV's in the fleet. Many times a conventional sedan will perform the job just as well and get up to 50% better fuel economy.
- Tighten the justification requirements for those who want to order SUV's for their agencies.
- Work with fuel suppliers to have more E-85 and B-20 available to state fleet.

V. Agency Strategies to Increase the Efficiency of Transportation

- Work to educate employees on combining trips to reduce miles driven.
- Educate employees on driving conservatively, checking tire pressure monthly and keeping up to date on regular maintenance on vehicles.
- Reduce meetings away from office and encourage conference calls.
- Have agencies do an inventory of their fleet vehicles and conduct a needs assessment. Many times an agency will find they do approximately 20% of their travel in mountainous area and dirt roads but have 60% SUV's in their fleet. This is an area where changing the fleet to more conventional sedans can save thousands of dollars in fuel costs.
- Set up a telecommuting program at your agency for employees that have jobs that will allow them to work from home.
- Look at implementing flexible work schedules.

Action Steps to Increase Fleet Efficiencies

A variety of short-term actions state agencies can take to reduce their environmental impacts.

- Have all flex-fuel vehicles in agency use E-85 when practical. A map with station locaters will be in the car as well as a log sheet that shows when E-85 is used in the vehicle
- Create a checklist for vehicles with things to check at the beginning of every month. Is the vehicle due for maintenance? Check the tire pressure and add air if needed (increases fuel economy).
- No excessive idling for car to warm-up.
- Have fleet coordinators do a needs assessment for agency. How many SUV's and pick-up trucks does the agency really need? Can they replace some with cleaner burning more fuel-efficient cars?

Agency Greening Government Planning – Section 3

Executive Order D 005 05 requires all state agencies to work with the Greening Government Coordinating Council to develop, implement, and augment programs, plans and policies that save money, prevent pollution and conserve natural resources throughout state government. In order to assist agencies in this task, the Greening Government Steering Committee has come up with a Greening Government Implementation Plan Guide. This guidance document will help your agency complete a greening government plan that outlines the agency's environmental impacts, makes recommendations for reducing these impacts, and establishes short and long-term objectives for your agency. Section 3 of the Guide, Agency Greening Government Planning, provides general guidelines on planning for greening government, as well as a "Template" for agencies to use when writing their Agency Greening Government Plan".

This Section is organized as a 5-step Road Map, which designed to be a simple, efficient process that can be applied to the wide range of agency operations within the State. The aim is for each agency to review its internal operations and identify ways to minimize environmental impacts and reduce costs. It is important that agencies spend at least some time going over each step in the Road Map, and answer all relevant questions during the planning process. The 5-step Road Map includes the following actions:

1. Establish a Greening Government Team, and assess operations and environmental impacts
2. Broadly define long-term goals
3. Identify and prioritize short-term actions
4. Integrate environmental impacts into the decision making process
5. Track and report on progress

Greening Government Planning Road Map

1. **Form Greening Government Team, Assess Operations and Environmental Impacts** (At agency level – Internal team)
    - Establish greening government team
    - Identify significant environmental impacts
    - Gather baseline data (Can be project specific)
2. **Broadly Define Long-Term Goals**
    - Brainstorm vision of long-term goals (what would a sustainable/green agency look like?)
3. **Identify and Prioritize Short-Term Actions (Implement)**
    - Identify and prioritize action steps
    - Identify appropriate training and education needs
4. **Develop Management Systems and Integrate Greening Government Into Decision Making**
    - Ensure controls are in place to implement strategies
    - Ask the right questions when decisions get made that affect environmental impacts
5. **Track and Report on Progress (Measure and Report)**
    - Track results of efforts and compare to baselines
    - Report progress to own staff
    - Submit annual reports to Coordinating Committee

Review to pursue continuous improvement

Agency Sustainability Plans

The questions and discussions facilitated by the 5-step road map closely follow the format of the Agency Greening Government Plan template, which was developed as guidance for agencies when writing their Greening Government Plans.

Road Map Step 1 – Form Greening Government Team and Assess Operations and Environmental Impacts

A. Create a Greening Government Team

Before taking concrete steps to develop agency-wide greening government actions, agencies should establish a Greening Government Team (Team). A Team that includes employees most familiar with major agency operations can provide an effective means to identify sustainable actions the agency may want to pursue, develop a strategy to implement such actions, and effectively communicate greening government goals to the entire agency.

a. Which job roles most affect agency operations that have a direct environmental impact?
b. Who needs to participate on the Team to ensure action plans are implemented?
c. Which staff has the resources to participate on the Team?

The appropriate number of people on the Team will depend on the number of agency facilities and complexity of agency operations.

Possible Staff Functions to Include on an Agency Greening Government Team

- Purchasing
- Operations/Facilities
- Fiscal
- Environmental/Health and Safety
- Management/Planning
- Information Technology

Once you have identified the key employees to be part of the Team, work with top-level agency management to authorize/request people to participate. Where possible, offer incentives for participation (PPAB Environmental Awards, P2 Champions, etc.) and make sure to provide a clear definition of the goals, responsibilities, and time commitments.

B. Assess Operations and Identify Environmental Impacts

The first step for the Team is to identify and describe key operations, the activities related to these operations, and the broad environmental impacts associated with these activities:

Identify the major operations the agency carries out and the activities involved, for example:

- Maintaining roads– driving vehicles, procuring road materials, de-icing
- Processing tax returns – paper use, copying, printing

- Housing students or inmates – heating and cooling, food preparation, laundry

Conduct a quick inventory of the environmental impacts associated with the activities listed above, for example:

- Energy/fuel use associated with vehicles, heating and cooling buildings, computer use – Air emissions, GHG's, waste vehicle fluids, etc.
- Chemical generation associated with product purchases (e.g. mercury thermometers), use of pesticides for landscaping and cleaning chemicals
- Resource use associated with consumption of paper, water and food
- Land impacts related to where buildings are situated, wastes disposed, etc.

Select a range of issues to focus on based on which of the activities the agency has direct control or influence over.

Gather agency operational baseline data on energy use (utility bills), materials consumption (purchasing records), waste generation (disposal records/fees), and other environmental impacts, wherever possible. Agencies should also work to identify the costs associated with each activity and impact. These baselines can be collected for specific projects that an agency undertakes (e.g. if you change out 100 light fixtures, give the before and after energy use for the project).

Agencies may want to use the sample chart below to help them create a broad picture of their operations, activities and associated environmental impacts.

General Operations	**Activities**	**Energy**	**Chemicals**	**Waste**	**Natural Resources**	**Health and Environmental Impacts**
Building Maintenance	Interior Cleaning		x		x	-chemicals affect water quality -indoor air quality
	Pest Control		x		x	-water quality -exposure to chemicals
Office Operations	Printing	x	x	x	x	-electricity use -paper use
	Office Equipment	x	x	x		-electricity use -air emissions -end-of-life disposal

Road Map Step 2 – Broadly Define Long-Term Goals

Creating a set of long-term goals can be helpful in stimulating ideas for action and in making decisions to prevent future problems. In light of the Step 1 findings on how the agency's activities impact the environment, the Team should do a quick brainstorm to come up with some examples of what the agency's operations would look like if they were sustainable. The following questioning strategy, based on sustainable principles, can encourage this creative thinking:

Environmental Impact	Long-Term Sustainable Solutions
Fossil fuel use/air pollution?	-Vehicle operate on clean, renewable fuels -Energy for building heating and cooling from renewable sources such as solar, wind and hydro power.
Persistent and toxic chemicals?	-Reduce pesticide use through integrated pest management programs -Purchase organically grown food
Consumption of resources and degradation of natural systems?	-Purchase paper with high percentage or recycle content. -Only use native plantings for lawns and grounds -Wood products from sustainably harvested forests

Once the Team has identified general long-term greening government goals, it should move to Road Map Step 3 to identify and prioritize more specific short-term actions that can be implemented.

Road Map Step 3 – Identify and Prioritize Short-Term Actions

Inevitably, there will be a gap between an agency's current activities and impacts versus the long-term vision of how a sustainable agency should look. This step is designed to help your agency define how to close that gap over time by identifying a list of what actions it can take now t move toward the vision of a sustainable agency, thereby reducing environmental impacts and lowering operational costs.

Add ideas about the 5 chosen categories that can be used as a starting point. Have Coordinating Committee collect examples and list for reference. The Team can use these examples, as well as its own proposals, to put together a broad list of ideas that could help move the agency toward more sustainable operations.

Once the Team has brainstormed a list of potential actions, it can prioritize which actions to pursue by considering the following questions:

Question	***Yes***	***No***
Will the action result in environmental/health benefits?		
Are the environmental benefits significant?		
Will the action result in a cost savings over the life of the product/action?		
Are the cost savings significant?		
Will the action support progress in one or more of the Implementation Guide priority areas?		
Is the time frame and ease of implementation manageable given agency resources?		
Would this activity help to maintain compliance and meet regulatory requirements?		
Could the action reduce compliance obligations (eliminating a hazardous waste)?		
Is this issue of significant concern to employees, or those who use your services, etc?		
Does the activity have a clear educational value or provide high visibility?		

Those actions that have a "yes" answer to many or all of the questions should obviously be given highest priority. The long-term vision developed in Step 2 also should be considered as the Team selects actions. While elements of the vision may not be practical today, the Team should pursue actions that make future efforts easier to pursue (for example, design a new building's roof angle to allow solar panels to be added later if current economics don't make that choice viable today).

After selecting priority actions, the Team can create a greening government workplan that assigns responsibilities and due-dates for implementation. Agencies may want to use the inventory developed by the Coordinating Committee to guide them in developing their current list of priorities.

What if my agency has a small staff and only leases office space?

Examples of Actions for Small Offices in Leased Space

- Purchasing – buy recycled, remanufactured products, energy efficient office equipment
- Building contract/lease – include conditions in the lease agreement regarding recycling, non-toxic cleaners, energy efficiency, etc.
- Waste prevention – paper use reduction, double-sided copying, behavior changes to increase recycling
- Flex time – telecommuting, encourage employees to use public transit
- Energy efficiency – computer use, turn off lights, etc.
- Choice of office location – Select a site close to public transportation and other services

Planning for greening government should also be accompanied by appropriate education and training of agency employees. Training can take many forms, from a formal workshop on one or more environmental topics, to simple reminders placed around the workplace. The State Sustainability Division has developed various educational sessions that agencies can use to educate staff and promote sustainable practices. These training modules can be found at www.co.train.org.

Road Map Step 4 – Management Systems and Integrating Greening Government Into Decision Making

A. Integrating Greening Government Into Operations

While developing a greening government workplan is key, it is just as important to devise an ongoing process through which greening government priorities are actually carried out by an agency regardless of individual commitment. The Team should work with management to develop an internal system to ensure that the agency workplan is implemented throughout the agency and maintained over time.

Within each agency, choices are made by various people at certain points along the decision making process. At these key junctures, decisions can have long-term repercussions on the agency's environmental impacts. Teams should work to identify these key decision points and develop a process to ensure that environmental considerations and actions in the Plan are acknowledged and incorporated into these decision points.

The Team should consider the following questions:

1. Where are decision points that affect material/energy flows, e.g., purchasing, budget approvals, building design, etc?

2. How can we ensure greening government questions get asked when these decisions are made?
3. How can we ensure that when changes are planned that greening government issues are considered and opportunities pursued, e.g., building new building, buying new vehicles, etc?

Examples of Decision Points	***How to integrate Greening Government***
Purchasing – Choice of product or service purchases	• Incorporate EPP options into specifications, bids, RFP's. • Train employees who make purchases in environmental impacts of their choices and preferable alternatives
New construction, building modifications	• Select builder with LEED experience • Specify materials that meet environmental criteria
Budget meetings	• Incorporate criteria that requires that those requesting budget approval for new projects demonstrate that environmental impacts are considered and minimized where feasible
Facilities management	• Make sure solid waste contractors are asked to propose recycling options with associated cost comparisons.

B. Developing a Management System

Once key decision points have been identified, agencies should work to develop some sort of management system that allocates environmental responsibilities among its staff. Developing such a system will ensure that greening government policies and programs will be incorporated into on-going and long-term agency operations.

Given the diversity of agencies' activities and responsibilities, a greening government management system should be designed to fit the size and breadth of an agency's operations. A small office with ten employees may simply choose to develop an environmental office policy and raise environmental issues at their staff meetings, while an agency with multiple facilities and large impacts may elect to develop a more formalized system. Regardless of the type and complexity of the system chosen, it is critical that systems are formally written an approved by the Agency Director and distributed among all appropriate staff. It is also important to develop a system that remains flexible so that changes in agency structure, operations or circumstances can be easily addressed in revisions to the document.

Examples of ways to develop greening government management systems:

- Integrate environmental responsibilities into job descriptions and performance reviews

- Provide the opportunity for employee feedback to review program efforts
- Offer recognition – awards, highlight work at staff meetings
- Establish a written agency greening government policy that sets a broad vision for staff.
- Perform spot checks, e.g., is paper being recycled or is it in the regular trash?
- Incorporate environmental considerations into standard operating procedures, including education, training and information dissemination
- Ask designated individuals for periodic updates on progress

Road Map Step 5 – Track and Report on Progress

A key element of any successful greening government effort is to regularly track and report on progress in meeting greening government goals and objectives and make changes as necessary to ensure continuous improvement. The Governor's Executive Order D005 05 requires the Coordinating Committee to submit an annual progress report of all greening government projects implemented throughout the year and their environmental and economic benefits.

Agency Tracking and Reporting Form

The Coordinating Committee has developed an *Agency Tracking and Reporting Form* that will be issued each year by the Committee, and should be used by agencies to describe and account for their impacts and greening government efforts on an annual basis. The form requests information on the five greening government program areas:

- Energy Efficiency
- Water Conservation/Quality
- Waste Reduction and Recycling
- Environmental Preferable Purchasing
- Transportation

Data and information generated from the form will be compiled into the annual *State Greening Government Report* to the Governor, as required by Executive Order D005 05.

Continuous Improvement

In addition to this annual tracking, agencies should conduct their own review of their sustainability program. An annual review will provide agencies with an opportunity to step back and consider how well the greening government program is working. Key questions the Team should consider are:

- How effectively are we performing against our goals and targets?
- If our performance is not meeting expectation:
    - What is the problem e.g., resources, training, failed to revise plans when change occurred, etc?

    - What steps would prevent this problem in the future?
- Is our management system effective?
    - Are we catching mistakes before they become big problems?
    - Are we adapting to change effectively
- What are upcoming changes that may affect what we need to manage, such as new environmental regulations, changes in our operations, budgets, etc.
- What can we do to ensure continuous improvement?

Conclusion

Achieving a more sustainable agency through greening government may seem overwhelming, especially to those who have had little or no experience with the concept. Devising, implementing and evaluating greening government efforts, however, do not need to take an extensive amount of time or resources. Rather, agency greening government practices can be implemented though a simple step-by-step process that each agency can customize according to its own scope, abilities, resources and impacts. Agencies can rely on a wealth of existing information and resources that are available to them through the Greening Government Coordinating Committee.

At a minimum, agencies should strive to incorporate some of the key questions and environmental issues discussed in the Guide into their decision-making processes to ensure that significant impacts are addressed. Additionally, agencies can focus on those issues that have clear economic benefit and that are manageable given existing resources. Agencies should never lose sight of long-term greening government goals and remember that a more sustainable state government will result from new ideas and inclusion of staff at all levels.

Through changes in daily operations, ongoing programs, and long-range planning, state agencies can have a significant positive impact on the environment, economic efficiency of state government and the character of Colorado's communities.

Appendix I – State Greening Government Coordinating Council

Members appointed through Executive Order D 005 05:

1. Department of Personnel and Administration (DPA)
2. Department of Public Health and Environment (CDPHE)
3. Office of Energy Management and Conservation (OEMC)
4. Department of Labor and Employment (CDLE)
5. Department of Human Services (DHS)
6. Department of Agriculture (DOA)
7. Department of Transportation (CDOT)
8. Department of Corrections (DOC)
9. Department of Regulatory Agencies (DORA)
10. Department of Revenue (DOR)
11. Department of Public Safety (DPS)
12. Department of Education (DOE)
13. Department of Health Care Policy and Financing (
14. Department of Local Affairs (DOLA)
15. Department of Military Affairs (DOMA)
16. Department of Natural Resources (DONR)

Voluntary Members:

1.

Appendix II - Agency Greening Government Plan Template

Introduction

The Greening Government plan template is designed to provide agencies with a simple framework to help guide them to operate in a more sustainable fashion. These plans will need to be submitted to the Greening Government Coordinating Committee when completed. The State Sustainability Division staff as well as staff from the Office of Energy Management and Conservation and Department of Personnel and Administration will be available during the plan writing process to assist agencies with their efforts. For assistance with writing your plan contact:

Patrick Hamel	CDPHE	Patrick.hamel@state.co.us	303-692-2979
Richard Lee	DPA	richard.lee@state.co.us	303-866-4357
Susan Castellon	OEMC	susan.castellon@state.co.us	303-866-2259

Once the Agency Greening Government Plan is developed, agencies will only be responsible for reviewing and updating the information in the Plan each year, and will not have to develop a new plan unless major changes are in order.

Instructions

The template is broken into 5 sections with sub-headings that contain specific questions on information expected to be included in the Plan. Agencies should:

1. Review the *State Greening Government Planning and Implementation Guide* before writing the Plan. (The Administrative Team has developed this guide that includes background and educational information on Greening Government)
2. Respond to the questions included in brackets [ ] in each section of the template. These questions are included to help guide agencies in writing the Plan, but should not be considered all-inclusive. Agencies may add additional information they feel is appropriate.
3. Delete all italicized language upon completing each section of the Plan (your Agency Plan should not include the guidelines, these are included to help with writing the Plan).
4. Have your Agency Greening Government Council Representative review and sign the Plan prior to submitting it to the Administrative Team.
5. Agencies may want to submit a draft copy of their Plan to the Administrative Team prior to final submittal in order to receive feedback and comments.
6. Agencies must submit a final copy of their Plan to the Administrative Team:

   Colorado Department of Public Health and Environment
   Attn: Sustainability Division
   4300 Cherry Creek Drive South
   Denver, CO 80246

[Agency Name]
Greening Government Plan

Date:_____
Agency Coordinator:_____
Phone:_____
Email:_____

This Greening Government Plan has been reviewed and approved by (_____) of (_____) on (_____).
(name) (agency name) (date)

_____
Signature of Agency Head or other Designee

1. Agency Information, Impact Identification and Greening Government Team

Refer to "Road Map Step 1" of the Planning and Implementation Guide before writing this section of the Plan.

This section is intended to provide basic information about the agency, its roles and responsibilities, existing impacts associated with operations, and any costs associated with such activities. Agencies should also identify their Greening Government Team in this section. More specifically, agencies should include information on the following:

1.1 Agency Description and Scope

[Include information on agency mission, size, number of staff, number of facilities, location of facilities, number of buildings, etc…]

1.2 Agency Impacts on the Environment and Human Health

[Identify the major operational activities of your agency that effect the environment and human health. E.g. employees commuting to work, printing reports, using electricity, watering lawns, etc…]

[Where feasible, identify the specific impacts on these operational activities, e.g. CDPHE uses X gallons of water per year, X kilowatt-hours of electricity per year. Use the 5 sections of the implementation guide as a framework (i.e. energy, water, waste reduction and recycling, environmental preferable purchasing, and transportation), and identify any additional impacts.]

1.3 Agency Operational Costs

[Identify the financial costs of your agency's activities identified above, e.g. DPA spends $X per year on electricity, $X on fuel, $X on waste disposal.]

1.4 Agency Greening Government Team Members

[List members of your team, the roles they play, meeting schedule, or other relevant information.]

2. Long-Term Goals/Vision

Refer to "Road Map Step 2: Broadly Define Long-term Goals" before writing this section of the Plan.

2.1 Long-Term Goals

[Please identify your agency's long-term goals for greening government operations. These can be as broad as necessary and are not intended to be a list of specific actions the agency will be taking.]

[Agencies may wish to use this section to include a vision statement, environmental policy statement, letter of commitment from the Director, or other broad goal that relates to the agency's long-term goals.]

3. Short-term Actions and Priorities

Refer to "Road Map Step 3: Identify and Prioritize Short-term Actions" before writing this section of the Plan. Agencies should use this section to identify the priority areas they plan to focus on over the next 1 to 3 years.

3.1 Priority and Area Goals

[List 3 to 5 priority areas (e.g. recycling, water use, energy use) your agency will focus on, based on the biggest environmental impacts of your agency operation, opportunities for improvement, etc. over the next 1 to 3 years, and identify key short-term goals associated with these areas (e.g. Establish paper recycling in all offices; Eliminate purchases of mercury-containing products.)]

3.2 Agency Action Steps

[Agencies should identify specific strategies and actions required to meet short-term goals and address focus areas identified in 3.1.]
[The Greening Government Workplan (sample chart available in the Appendix III) is designed to help agencies identify appropriate strategies, specific tasks, and individual responsibilities and timeframes and should be submitted as part of the

Agency Greening Government Plan. Agencies may wish to replace the "responsible staff" column with Division or Title of responsible person, if appropriate.]

For ideas on a variety of strategies and action steps consult section 2 of the Planning and Implementation Guide.

4. Management Systems

Refer to "Road Map Step 4: Management Systems and Integrate Greening Government Into Decision-Making" before writing this section of the Plan.

4.1 Integrating Environmental Impacts into Key Decision Points

[Identify key decision points within your agency and identify the process that will ensure environmental impacts are taken into account at the correct point in the decision-making process. The "Road Map Step 4" has a chart that can be included in this section.]

4.2 Education and Training of Staff

[Identify ways your agency will educate appropriate staff on sustainability efforts and encourage new ideas within the agency.]

5. Tracking Progress and Program/Plan Review

Refer to "Road Map Step 5: Track and Report on Progress" before writing this section of the Plan.

5.1 Agency Tracking and Reporting Form

[Identify the process by which an agency will complete and submit the annual Agency Tracking and Reporting Form to be issued each year to the State Sustainability Administrative Team.]

5.2 Continuous Improvement

[Include a description of the following:

- The process by which greening government efforts will be evaluated and monitored to ensure they are working and achieving initial goals
- The process by which feedback will be encouraged and incorporated into future planning
- How this greening government plan will be reviewed and altered (if necessary) and who will be responsible for overseeing this process.]

Appendix III – Agency Greening Government Workplan Worksheet

For use in appendix II or the Agency Plan Template "Short Term Actions and Priorities" and should be submitted as part of the agency plan.

This worksheet is intended to help agencies develop an action plan to help identify the key greening government activities the agency wants to address, as well as identify the key staff necessary to ensure program success. The information provided here is for sample purposes only.

Greening Government Goal	**Benefits of Project**	**Specific Tasks**	**Responsible Staff**	**Timeline**
Increase paper recycling by 10% per year for 5 years.	• Solid Waste Reduction • Cost Savings	• ID vendors through state contract • Award vendor • Publicize Program • Provide bins • Begin recyclng	• Jane Doe, Purchasing • John Doe, Facilities • Greening Government Team	• March '06 review vendors • April '06 award vendor • May '06 educate employees • Etc…

Appendix IV: Indicators

Indicators (or measurements that can be compared from year to year) will be used to measure statewide progress for the environmental areas identified in the Executive Order. An initial list of indicators are listed below for informational purposes only:

State Greening Government Initial List of Indicators

1. **Energy Efficiency**
   - kWh of electricity reduced
   - Natural Gas, amount of therms reduced
   - Dollars saved on utility bills
   - % of state energy consumed from renewable energy

2. **Water Conservation and Quality**
   - Total gallons of water consumption reduced
   - Dollars saved on water reduction and sewage disposal
   - Pounds of pesticides, fertilizers eliminated from landscaping

3. **Waste Reduction and Recycling**
   - Number of new materials accepted at agency for recycling
   - Pounds of materials recycled
   - Agency recycling rate
   - Agency waste prevention results (specific projects, i.e. paper reduction)

4. **Environmentally Preferable Purchasing**
   - Number of agencies incorporating environmental criteria in service contracts
   - Dollars spent on EPP items (increase or decrease in cost compared to alternative)
   - Number of new products purchased that meet Green Seal Certification
   - Environmental benefits of EPP purchases by category. (i.e. X amount of paper purchased has 30% recycled content, this saved x amount of trees)

5. **Transportation**
   - Vehicle miles traveled per agency
   - Average fuel economy of agency fleet
   - Number of gallons of fuel used
   - Number of gallons of alternative fuels used in State Fleet.

6. **Activities**
   - Educational trainings
   - Workshops attended or hosted

Other indicators may be developed over time, based on available information and changes to reporting and tracking protocols.

Appendix V: Tracking Forms

Energy Efficiency Inventory/Tracking Sheet

Using the table provided below, please describe projects or examples that demonstrate ways your agency has reduced energy or used renewable energy sources.

Facility Info e.g. location, name and contact	Project Description e.g. date implemented, project details	Cost Description e.g. total cost, annual savings	Results e.g. kWh reduced, btu's reduced, etc

Please describe any future energy efficiency or renewable energy programs your agency is planning on implementing at your facilities.

Facility Info	Future Project Description	Projected Cost	Projected Results

Recycling and Waste Reduction Inventory/Tracking Sheet

Using the table provided below, please describe any examples of reuse, recycling or waste prevention projects or programs at your agency's facilities.

Facility Info e.g. location, name and contact	Project Description e.g. date implemented, project details	Cost e.g. total cost, annual savings	Results e.g. reduction in solid waste generation, amount recycled, recycling rate, etc.

Please describe any future waste reduction, reuse or recycling programs your agency is planning on implementing in the future (where appropriate, please include specific facility plans).

Facility Info	Future Project Description	Projected Cost	Projected Results

Water Use and Conservation Inventory/Tracking Sheet

The intent of this section is to determine what water conservation efforts are occurring and to track water conservation and reduction strategies at state agencies.

Using the table provided below, please describe any examples of water conservation projects or programs at your agency's facilities.

Facility Info e.g. location, name, and contact	Project Description e.g. date implemented, project details	Cost e.g. total cost, annual savings	Results e.g. gallons of water conserved

Please describe any future water conservation programs your agency is planning on implementing.

Facility Info	Future Project Description	Projected Cost	Projected Results

Environmentally Preferable Purchasing Inventory/Tracking Sheet

The intent of this section is to measure and track the purchases of environmentally preferable products (e.g. those that contain recycled content, are energy efficient, less toxic, etc.) and services by state agencies, and to identify the environmental and health impacts associated with such purchases as well as cost impacts.

Using the table provided below, please describe any examples of environmentally preferable purchasing (EPP) at your agency. (Do we want to say purchases that go beyond purchases made through statewide contracts? Should these be tracked by DPA? Ask Kay what she thinks) Please include examples of:

- EPP criteria and/or purchases made through your agency's service contracts (e.g. EPP cleaners purchased by janitorial company)
- Agency EPP purchases not made from a statewide contract (If DPA will be tracking statewide contract purchases)
- New EPP products purchased or tested by your agency

Facility Info e.g. location, name, and contact	Project Description e.g. date implemented, project details	Cost e.g. total cost, annual savings	Results e.g. recycled content in purchases, toxics reduced in cleaning chemicals, kWh reduction from energy efficiency.

Please describe any future environmentally preferable purchasing efforts your agency is planning on implementing.

Facility Info	Future Project Description	Projected Cost	Projected Results

Fleet Operations Inventory/Tracking Sheet

The intent of this section is to identify the impacts of state agency vehicle usage by measuring gallons of gasoline and other fuels used, number of alternative fuel vehicles and hybrids purchased and vehicle miles traveled in state owned vehicles.

Using the table provided below, please describe any examples of vehicle or fuel use projects or programs at your agency that are designed to reduce fuel consumption, greenhouse gas emissions or other pollutants.

Facility Info e.g. location, name and contact	Project Description e.g. date implemented, project details	Cost e.g. total cost, annual savings	Results e.g. ghg emission reductions, gallons of gasoline conserved, etc.

Please describe any future vehicle fuel reduction programs your agency is planning on implementing.

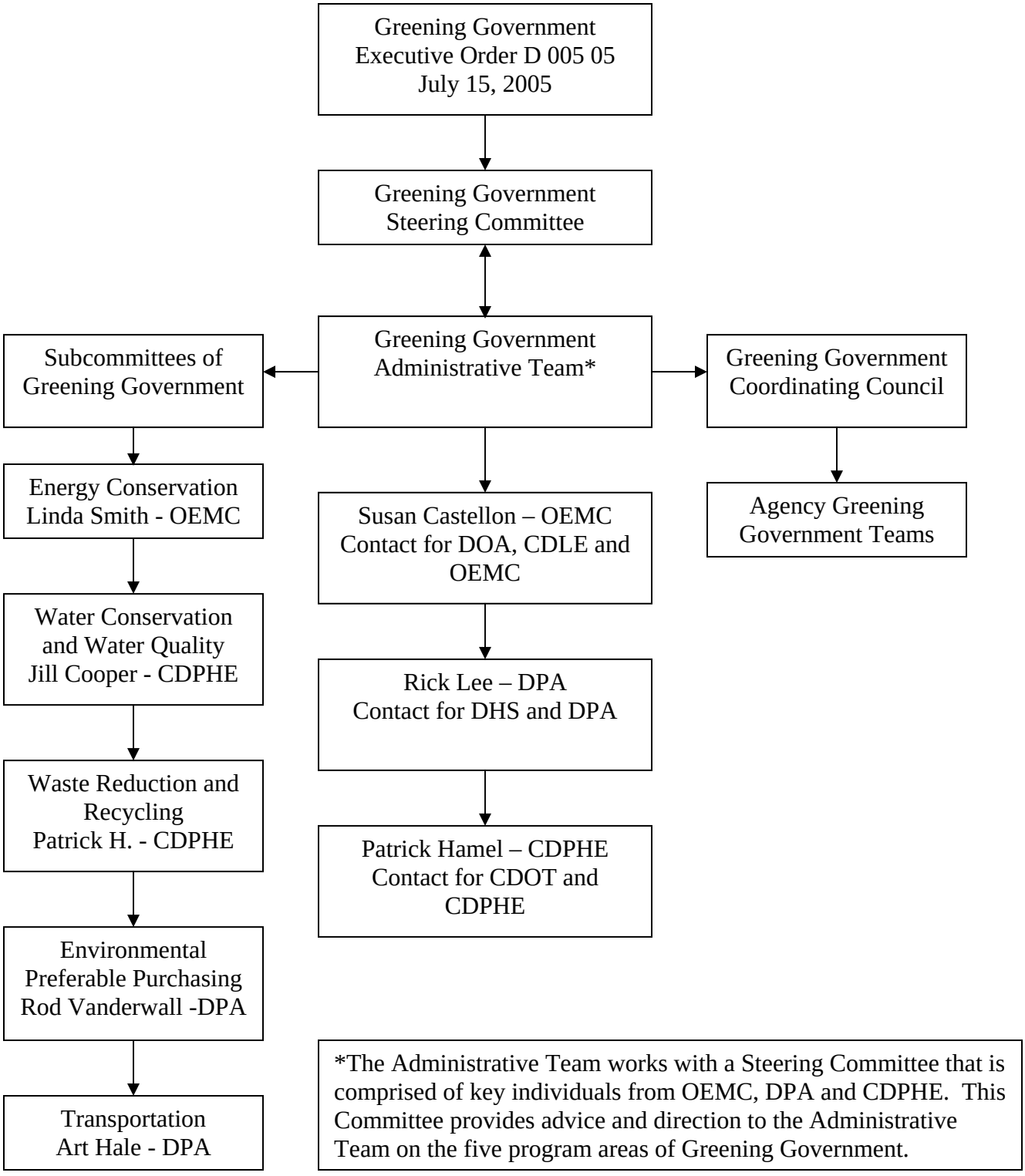
Facility Info	Future Project Description	Projected Cost	Projected Results

Please check the appropriate box if your agency offers any of the following incentives or assistance to employees choosing public transportation, car-pooling or bike riding as their method of commuting to work.

- □ Eco-passes
- □ Showers/lockers for bike commuters
- □ Secure bike storage
- □ Car-pooling incentives
- □ Preferred parking for hybrid vehicles
- □ Other: _____

Appendix VI: Greening Government Organizational Chart and Roles and Responsibilities

Greening Government Organizational Chart



Greening Government Roles and Responsibilities

In order for the State of Colorado's Greening Government Program to function properly it is important to define the roles and responsibilities of all groups that are involved in the program. The following is a list of responsibilities for the Greening Government Council, Steering Committee and all Subcommittees.

- **Greening Government Coordinating Council (Council)**
  - Shall meet periodically to provide feedback and ideas to the Administrative Team and Steering Committee on how projects are coming along and how the Greening Government process is working.
  - The Council member will be the lead for their agency's Greening Government Team or appoint somebody from their agency to be the lead contact.
  - Shall submit project results from their agency's work to the Administrative Team.
  - Review the yearly report that will be sent to the Governor's Office.

- **Greening Government Steering Committee (Committee)**
  - Develop structure and maintain the State's Greening Government Program.
  - Establish Greening Government goals.
  - Give recommendations to the Council on priorities for Greening Government projects.
  - Assist in the development and review of guidance documents and tracking forms.
  - Draft annual progress report for Governor's Office.
  - Collect, maintain, evaluate and disseminate best practices and procedures throughout the state.

- **Greening Government Subcommittees**
  - Develop background and educational materials for the five chosen areas.
  - Collect data from agencies on projects they have already completed (inventory).
  - Assist agencies with the implementation of projects related to their field of expertise.